to provide an optical microcantilever bar capable of admitting and propagating light in an efficient manner, and a manufacturing method for making the optical microcantilever. It is a further object to provide an optical microcantilever holder for supporting the optical microcantilever bar and an optical element. It is a still further object to provide an optical microcantilever bar capable of improving an S/N ratio of a light image of a scanning near field microscope.--

Please replace the heading beginning at page 4, line 21, with the following heading:

--SUMMARY OF THE INVENTION--

Please replace the paragraph beginning at page 4, line 22, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, an optical microcantilever according to a first embodiment of the invention is an optical microcantilever for use with a scanning near field microscope and comprises an optical waveguide, having a light input/output end and a free end, for propagating light, a tip formed at the free end, with a microscopic aperture at an end thereof, and reflecting means for reflecting light propagated from the light input/output end in such a manner that the light is guided towards the

A3 end

microscopic aperture, or reflecting light propagated from the microscopic aperture towards the light input/output end.--

Please replace the paragraph beginning at page 5, line 11, with the following rewritten paragraph:

--Further, an optical microcantilever according to a second embodiment of the invention is an optical microcantilever for use with a scanning near field microscope and comprises an optical waveguide, having a light input/output end and a free end and a nose section at an angle with respect to an optical axis of propagating light passing through the light input/output end, for propagating light, a tip formed at the free end, with a microscopic aperture an an end thereof, and reflecting means for reflecting light propagated from the light input/output end in such a manner that the light is guided towards the microscopic aperture, or reflecting light propagated from the microscopic aperture towards the light input/output end.--

A4

Please replace the paragraph beginning at page 6, line 5, with the following rewritten paragraph:

--In the optical microcantilever according to the first and second embodiments of the invention, at least part of the optical waveguide comprises a core, and a cladding is

A5 cont'd

deposited on one side of the core, or both sides of the core, or is deposited so as to surround the core.--

Please replace the paragraph beginning at page 6, line 15, with the following rewritten paragraph:

--In the optical microcantilever according to the foregoing embodiments, a light-blocking film is provided on the optical waveguide at the side where the tip is formed, and a reflecting film is provided at the opposite side to the side where the tip is formed.--

Please replace the paragraph beginning at page 6, line 23, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, a method, according to a first embodiment, of manufacturing an optical microcantilever is a method for manufacturing an optical microcantilever for use with a scanning near field microscope and includes the steps of forming a step to be taken as a mold for an optical waveguide at the substrate, depositing a reflecting film on the substrate, depositing an optical waveguide on the reflecting film, forming a tip by working the optical waveguide, depositing a light-blocking film on the optical waveguide, forming a microscopic aperture at the end of the tip, and forming a supporting section by having the substrate remain on the side to be a light

a7 end

input/output end and removing the substrate on the side to be the free end.--

Please replace the paragraph beginning at page 7, line 23, with the following rewritten paragraph:

--In the method of the first embodiment for manufacturing the optical microcantilever, an angle of the step formed is an angle enabling propagating light propagating from the light input/output end to be guided towards the microscopic aperture by the reflecting film deposited in the reflecting film depositing step, or is an angle enabling propagating light propagating from the microscopic aperture to be guided towards the light input/output end.--

a8

Please replace the paragraph beginning at page 8, line 12, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, an optical microcantilever according to a third embodiment of the invention is an optical microcantilever comprising a cantilever constituted by an optical waveguide, a supporting section for the cantilever, th optical waveguide having a light input/output end and a free end, an optical element guide formed at the supporting section for deciding a position of an optical element acting on light entering the optical

a9 cont'd

a9 end

waveguide, and a channel provided between the light input/output end and the optical element guide.--

Please replace the paragraph beginning at page 9, line 2, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, a method, according to a second embodiment, of manufacturing an optical microcantilever is a method for manufacturing an optical microcantilever for use with a scanning near field microscope, comprising the steps of forming a step to be taken as a mold for an optical waveguide at the substrate, forming an optical element guide at the substrate, depositing an optical waveguide on the substrate, forming a light input/output end of the optical waveguide, forming a channel by working the substrate between the light input/output end and the optical element guide, exposing the optical element guide by removing the optical waveguide on the optical element guide, and forming a supporting section by having the substrate remain on the side to be a light input/output and and removing the substrate on the side to be the free end.--

a10

Please replace the paragraph beginning at page 10, line 3, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, a method, according to a third embodiment, of manufacturing an

a11 cont'd

optical microcantilever is a method for manufacturing an optical microcantilever for use with a scanning near field microscope, including the steps of forming a step to be taken as a mold for an optical waveguide at the substrate, forming an optical element guide at the substrate, depositing a reflecting film on the substrate, depositing an optical waveguide on the reflecting film, forming a tip by working the optical waveguide, depositing a light-blocking film on the optical waveguide, forming a microscopic aperture at the end of the tip, forming a light input/output end of the optical waveguide by removing the light blocking film, the optical waveguide, and the reflecting film, for the portion to constitute the light input/output end of the optical waveguide, forming a channel by working the substrate between the light input/output end and the optical element guide, exposing the optical element guide by removing the light-blocking film, the optical waveguide, and the reflecting film on the optical element guide, and forming a supporting section by having the substrate remain ont he side to be a light input/output end and removing the substrate on the side to be the free end.--

All end

Please replace the paragraph beginning at page 12, line 3, with the following rewritten paragraph:

--In order to achieve the aforementioned objections,

12 cont'd

an optical microcantilever according to a fourth embodiment is an optical microcantilever comprising a cantilever-shaped optical waveguide, a tip formed at the free end of the optical waveguide and having a microscopic aperture at an end, thereof, wherein the optical waveguide comprises: a light input/output end at a fixed end thereof, a nose section formed between the free end and the fixed end at an angle with respect to an optical axis of the optical waveguide of the fixed end, and reflecting means for reflecting light propagating from the light input/output end in such a manner that the light is guided towards the nose section, and/or reflecting light detected by the microscopic aperture and transmitted to the nose section towards the light input/output end.--

A12 end

Please replace the paragraph beginning at page 12, line 15, with the following rewritten paragraph:

--Further, in the optical microcantilever of the fourth embodiment, the optical waveguide has a head section at the end of the nose section extending substantially parallel with the optical waveguide of the fixed end, and the tip is formed at the head section.--

A13

Please replace the paragraph beginning at page 12, line 20, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, the optical microcantilever according to any of the foregoing embodiments has a lens provided between the tip and the reflecting means. Preferably, the lens is a convex lens. Alternatively, the lens is a fresenel lens. Still further, the lens is preferably a gradient-index lens.--

A14

Please replace the paragraph beginning at page 13, line 9, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, in the optical microcantilever according to any of the foregoing embodiments, the tip of the optical microcantilever employed in a scanning near field microscope is formed of a material having a higher refractive index that the optical waveguide.--

A15

Please replace the paragraph beginning at page 13, line 18, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, an optical microcantilever according to a fifth embodiment comprises a substrate, a cantilever-shaped optical waveguide formed at the substrate, a tip, having a microscopic aperture at an end thereof, formed at a side of the free end of the

A16 cont'd

cantilever, a light input/output end positioned at a side of the fixed end of the optical waveguide, and an optical element guide, formed on the substrate on the side of the light input/output end, for deciding a position of an optical element acting on light entering the optical waveguide and on light exiting from the optical waveguide, wherein the light input/output end projects above the optical element guide.--

Please replace the paragraph beginning at page 14, line 6, with the following rewritten paragraph:

--In order to achieve the aforementioned objects, an optical microcantilever according to a sixth embodiment comprises a substrate, a cantilever-shaped optical formed at the substrate, a light input/output end positioned at a side of the fixed end of the optical waveguide, a tip provided at the side of the free end of the cantilever and having a microscopic aperture at an end thereof, and light-blocking means for ensuring that light scattered by the light input/output end is not transmitted in the direction of the tip.--

Please replace the paragraph beginning at page 14, line 13, with the following rewritten paragraph:

--Further, in the optical microcantilever of the sixth embodiment, the light-blocking means is arranged above

q18 end

the substrate and the optical waveguide, and provides a wall for blocking the scattered light.--

Please replace the paragraph beginning at page 14, line 16, with the following rewritten paragraph:

q19

--Further, in the optical microcantilever of the sixth embodiment, the light-blocking means comprises a light-blocking agent located on the substrate an the optical waveguide and a light-blocking film located on the light-blocking agent, and teh light-blocking film is located in such a manner as to cover at least the light input/output end.--

Please replace the paragraph beginning at page 14, line 21, with the following rewritten paragraph:

q20

--Further, in the optical microcantilever of the sixth embodiment, the light-blocking means comprises a light-blocking film located on the substrate and the optical waveguide and a light-blocking agent arranged so as to cover at least part of an end of the light-blocking film, and the light-blocking film is located in such a manner as to cover at least the light input/output end. Preferably, the light-blocking film is movable.--